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10/532,747

04/26/2005

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65565 7590 10/01/2008  
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EXAMINER

JOY, DAVID J

ART UNIT

PAPER NUMBER

1794

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                                      |                                     |  |
|------------------------------|--------------------------------------|-------------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/532,747 | <b>Applicant(s)</b><br>FUKUI ET AL. |  |
|                              | <b>Examiner</b><br>David J. Joy      | <b>Art Unit</b><br>1794             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 7,8,12,13,15,18,22,23,26,27,29,30 and 32-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6,9-11,14,16,17,19-21,24,25,28,31 and 36 is/are rejected.
- 7) ☒ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>04/26/2005</u> .  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election *without* traverse of Group I, Claims 1-31 and 36, in the reply filed on July 15, 2008 is acknowledged. Likewise, Applicant's election *without* traverse of Species A(2), B(1), C(2), C1(c) and C2(c), Claims 5, 6, 11, 16, 17, 20, 21, 24, 25 and 31, in the reply filed on July 15, 2008 is also acknowledged.
2. Claims 7, 8, 12, 13, 15, 18, 22, 23, 26, 27, 29, 30 and 32-35 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions and species, there being no allowable generic or linking claim. Election was made *without* traverse in the reply filed on July 15, 2008.

### *Priority*

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Information Disclosure Statement***

4. The information disclosure statement(s) submitted on April 26, 2005 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner has considered the references provided on the information disclosure statement. However, it is noted that the sixteenth and seventeenth entries in the "Foreign Patent Documents" section were struck because those two entries are duplicative of the third and fifth entries, respectively.

***Specification***

5. The extremely lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Claim Rejections - 35 USC § 112***

6. Claim 31 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 31 recites the limitation "the cured product of

the material" in the second line of the claim. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-4, 9-11, 14, 16, 17, 19-21, 24, 25, 28, 31 and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by the Japanese Patent Application Publication of Shunji et al. (JP 2001-302936; hereinafter "Shunji"). The teachings of Shunji were made clear to Examiner using a machine-generated translation of Shunji. For the purposes of this Office Action, all citations are to that machine-generated translation, and a copy of that translation accompanies this written action.

9. Shunji teaches a heat-decaying material ("heat-conductive resin composition") that contains a polyoxyalkylene resin compound that is crosslinked by a crosslinking compound that reacts with hydrolytic silyl functional groups on the polyoxyalkylene

resin (see Abstract; see also ¶ [0007]). Shunji expressly provides that the resin can be any of a number of commercially-available compounds, such as MS Polymer S-203, S-303, S-903, SAT-200, MA-403, MA-447, EP103S, EP303S, EP505S, ESS-2410, ESS-2420 or ESS-3630, which are the same resins that are disclosed in the instant specification for the resin in the heat-decaying material (see ¶ [0015]; see also ¶ [0288] of the instant specification). Consequently, given that the resin species taught in Shunji are identical to what is delineated in the specification of the instant application, then the resin in Shunji will inherently possess the claimed properties, content ratios, thermal characteristics, and reactive behaviors as the resin that is presently claimed. The claiming of a new use, new function or unknown property, which is inherently present in the prior art, does not necessarily make the claim patentable. *In re Best*, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977). Mere recitation of a newly-discovered function or property, inherently possessed by things in prior art, does not cause claim language drawn to those things to be distinguishable over prior art.

10. Shunji teaches that the resin sheet can be pasted to a board, which will clearly reinforce the sheet (see ¶ [0036]). Shunji also teaches that the polyoxyalkylene resin has a molecular weight in the range of 4000 to 30,000, and a viscosity in the range of 10 cP to 10,000 cP (it is noted that 1 cP is equivalent to 1 mPa·s) (see ¶¶ [0012] and [0016]). In

addition, Shunji teaches that resin can also contain a decomposition retardant in the form of an amine compound or an organic tin (see ¶ [0017]). Further, Shunji provides that the resin material can be in sheet form (see ¶ [0030]).

### ***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shunji, in view of the U.S. Patent of Sakaguchi (7,195,720).

14. Shunji teaches a heat-decaying material having all of the claimed limitations, as discussed hereinabove. Shunji, though, does not teach or fairly suggest the inclusion of a peroxide as a decomposition promoter. Sakaguchi, drawn to a curable composition for heat conductive material, teaches the addition of an organic peroxide to a resin composition comprising a polyoxyalkylene resin (see Column 8, Line 66 – Column 9, Line 17). Sakaguchi also expressly provides that the peroxide may be added as a storage property improving agent, but since Sakaguchi discloses the addition of a peroxide, as claimed in the instant application, it follows that the peroxide would intrinsically function as a decomposition promoter as claimed (*Id.*). Given that both Shunji and Sakaguchi are drawn to the same field of invention, it would have been obvious to a person having ordinary skill in the art, at the time of invention, to have included a peroxide, as disclosed by Sakaguchi, in the resin composition of the heat-decaying material taught by Shunji, thereby arriving at the presently claimed invention.

### ***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. With respect to the other Japanese documents cited on the International Search Report for International Application No. PCT/JP03/15104 (i.e., JP



2002-076203, JP 09-194548, JP 09-077966, JP 2001-247849, JP 2002-088267, JP 2003-313443, JP 2003-089742 and JP 2003-206584), while these references were cited as X-references, the references provided information of limited detail and applicability to the present claims, and any citations thereto would merely be cumulative of the rejections hereinabove.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David J. Joy whose telephone number is (571) 272-9056. The examiner can normally be reached on Monday - Friday, 7:00 AM - 3:30 PM EST.

17. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie E. Shosho can be reached on (571) 272-1123. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

18. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 1794

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or (571) 272-1000.

/DJJ/

Examiner, Art Unit 1794

09/23/2008

/Callie E. Shosho/

Supervisory Patent Examiner, Art Unit 1794